

## Sequences

1. Write the next two numbers and the rule for each sequence:-
  - (a) 2, 4, 6, 8, \_\_, \_\_.
  - (b) 5, 11, 17, 23, \_\_, \_\_.
  - (c) 9, 21, 33, 45, \_\_, \_\_.
  - (d) 19, 16, 13, 10, \_\_, \_\_.
2. John bought a tree which was 13 cm high. It grew 4 cm every month. How high was it after 5 months?
3. Write the first ten numbers in the sequence which:-
  - (a) starts at 7 and increases by 3.
  - (b) starts at 21 and decreases by 2.
4. 

69	214	93	10
915	13	12	105
27	328	639	41
262	1008	18	9

  - (a) List the numbers in the box which are ODD.
  - (b) List the numbers which are EVEN.
5. Write the next two numbers in the sequence and give the rule to find the next number.
  - (a) 12, 16, 20, 24, \_\_, \_\_.
  - (b) 1200, 600, 300, \_\_, \_\_.
  - (c) 100, 92, 84, 76, \_\_, \_\_.
6. Which of these numbers are multiples of (i) 6 (ii) 11.

3	5	9	10	12
15	20	28	32	39
40	46	55	56	60
7. Find three consecutive numbers which add to 27 and multiply to 720.
8. For the sequence 6, 8, 10, 12, 14,
  - (a) Write down the 3rd term.
  - (b) Write down the 7<sup>th</sup> term.
  - (c) Write down the 11<sup>th</sup> term.

9. (a) Find the Lowest Common Multiple of:- (i) 3 and 12 (ii) 6 and 10.  
(b) Find the Highest Common Factor of:- (i) 12 and 32 (ii) 24 and 36.  
(c) Find the next three numbers in each Fibonacci sequence. (i) 1, 5, 6, 11, \_\_, \_\_,  
(ii) 4, 5, 9, 14, \_\_, \_\_.
10. Write the multiplications that show the Prime Factors of:- (a) 64 (b) 420.
11. Find:- (a)  $3^2$  (b)  $9^2$  (c)  $11^2$  (d)  $3^3$  (e)  $4^3$
12. Find:-  
(a) the smallest even multiple of 5  
(b) the smallest multiple of 9 which is between 120 and 130.  
(c) a number which is a multiple of 7 and 8.  
(d) write down the 3<sup>rd</sup> and 7<sup>th</sup> triangular numbers.

